

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device, connected to and interfacing with a subscriber network within a subscriber location, said device enabling network connectivity of said subscriber with a network service provider, the device comprising:

a wireless transceiver;

an antenna coupled to the wireless transceiver; and

a switch interfacing with said subscriber network, said switch being coupled to the wireless transceiver and to a wireline network, the switch exchanging data between said interfaced subscriber network and the network service provider over the wireline network during normal operation and also exchanging data with the network service provider via the wireless transceiver when connectivity is lost on the wireline network;

wherein the wireless transceiver is configured to relay data from another wireless transceiver interfacing with another subscriber network that has lost said connectivity to the wireline network due to a problem in a residence or place of business of a network subscriber associated with said another subscriber network, said another wireless transceiver being connected to said wireless transceiver through no more than one other wireless transceiver interfacing with one other subscriber network that has also lost said connectivity to the wireline network when said data is being relayed, said another and

said one other wireless transceivers having been wireline-connected to the wireline network during normal operation, said data relay being accomplished by

receiving a connect message from said another wireless transceiver at said no more than one other wireless transceiver ;

encapsulating the connect message within a message addressed from said no more than one other wireless transceiver and transmitting the encapsulated connect message from the no more than one other wireless transceiver to the wireless transceiver;

encapsulating the encapsulated connect message within a message addressed from the wireless transceiver and transmitting the further-encapsulated connect message from the wireless transceiver over the wireline network to a network control;

receiving an indication of authorization at the wireless transceiver and at the no more than one other wireless transceiver;

receiving data packets from said another wireless transceiver at the no more than one other wireless transceiver ; and

based on the indication of authorization, forwarding the data packets between said no more than one other wireless transceiver to the wireless transceiver and from the wireless transceiver to the wireline network.

2. (canceled)

3. (previously presented) The device of claim 1, wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the

switch and to the wireline network.

4. (canceled)

5. (original) The device of claim 1, wherein the device is physically located at a location of a subscriber of the network service provider.

6. (original) The device of claim 1, wherein the wireless transceiver operates in accordance with IEEE 802.11 standards.

7. (original) The device of claim 1, wherein the wireline network includes a fiber network.

8. (original) The device of claim 1, wherein the wireline network includes coaxial cables.

9. (original) The device of claim 1, wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed.

10-36. (canceled)

37. (currently amended) A system comprising:

a first wireline connection to a first subscriber location having a first subscriber network;

a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and

a first switch coupled to the first wireless transceiver, the first wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location; and

a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed by:

receiving a connect message from the first NIU at the second NIU;
encapsulating the connect message within a message addressed
from the second NIU and transmitting the encapsulated connect message over the second
wireline connection to a network control;

receiving an indication of authorization at the second NIU;
receiving data packets from the first wireless transceiver at the
second NIU; and

based on the indication of authorization, forwarding the data
packets over the second wireline connection.

38. (canceled)

39. (currently amended) The system of claim ~~[[38]]~~37, wherein relaying data over the second wireline connection further includes:

determining whether the second wireline connection is operational;
performing the forwarding of data packets when the second wireline connection is determined to be operational.

40. (currently amended) The system of claim ~~[[38]]~~37, wherein relaying data over the second wireline connection further includes:

receiving a disconnect message from the first NIU at the second NIU;
ending the relaying based on the disconnect message.

41. (previously presented) The system of claim 37, wherein the first wireless transceiver and second wireless transceiver operate in accordance with IEEE 802.11 standards.

42. (previously presented) The system of claim 37, wherein the first wireline connection and the second wireline connection include at least one of a fiber optic cable and a coaxial cable.

43. (previously presented) The system of claim 37, wherein the first NIU monitors a connection state of the first wireline connection, and resumes communication over the first wireline connection when the first wireline connection is restored.

44. (currently amended) A system comprising:
a first wireline connection to a first subscriber location having a first subscriber network;
a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and
a first switch coupled to the first wireless transceiver, the first

wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location;

a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

a third wireline connection to a third subscriber location having a third subscriber network, wherein the third subscriber location is remote from both the first subscriber location and the second subscriber location;

a third NIU at the third subscriber location, the third NIU including:

a third wireless transceiver; and

a third switch coupled to the third wireless transceiver, the third

wireline connection and the third subscriber network, the third switch providing data communications between the third wireline connection and the third subscriber network during normal operation of the third wireline connection and the third switch providing data communications between the third wireless transceiver and the third subscriber network when connectivity on the third wireline connections fails;

wherein the second NIU is configured to relay first subscriber network data directly between the first wireless transceiver and the second wireless transceiver when the first wireline connection has failed, and wherein the third NIU is configured to relay second subscriber network data and said first subscriber network data directly between the second wireless transceiver and the third wireline connection when the second wireline connection also has failed, and

wherein relaying said data over the second wireline connection includes:

receiving a connect message from the first NIU at the second NIU;

encapsulating the connect message within a message addressed from the second NIU and transmitting the encapsulated connect message from the second wireless transceiver to the third wireless transceiver;

receiving an indication of authorization at the second NIU;

receiving data packets from the first wireless transceiver at the second NIU; and

based on the indication of authorization, forwarding the data packets between the second wireless transceiver and the third wireless transceiver; and

wherein relaying said data over the third wireline connection includes:

receiving the encapsulated connect message from the second NIU at the third NIU;

encapsulating the encapsulated connect message within a message addressed from the third NIU and transmitting the further-encapsulated connect message from the third NIU over the third wireline connection to a network control.

45. (canceled)

46. (currently amended) The system of claim [[45]]44, wherein relaying said data between the second wireless transceiver and the third wireless transceiver further includes:

determining by the second NIU whether the second wireline connection is operational;

performing the forwarding of data packets between the second wireless transceiver and the third wireless transceiver when the second wireline connection is determined to have failed.

47. (currently amended) The system of claim [[45]]44, wherein relaying said data between the second wireless transceiver and the third wireless transceiver further includes:

receiving a disconnect message from the first NIU at the second NIU;
ending the relaying based on the disconnect message.

48. (previously presented) The system of claim 44, wherein the first wireless transceiver, second wireless transceiver and third wireless transceiver operate in accordance with IEEE 802.11 standards.

49. (previously presented) The system of claim 44, wherein the first wireline connection, the second wireline connection and the third wireline connection include at least one of a fiber optic cable and a coaxial cable.

50. (previously presented) The system of claim 44, wherein the first NIU monitors a connection state of the first wireline connection, and resumes communication over the first wireline connection when the first wireline connection is restored.

51. (currently amended) A method comprising:

providing a first wireline connection to a first subscriber location having a first subscriber network;

providing a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and

a first switch coupled to the first wireless transceiver, the first wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing

data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

providing a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location; and

providing a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed by:

receiving a connect message from the first NIU at the second NIU;

encapsulating the connect message within a message addressed from the second NIU and transmitting the encapsulated connect message over the second wireline connection to a network control;

receiving an indication of authorization at the second NIU;

receiving data packets from the first wireless transceiver at the
second NIU; and
based on the indication of authorization, forwarding the data
packets over the second wireline connection.

52. (currently amended) A network, comprising:

a plurality of network interface units serviced by a network service provider, each one of said units interfacing with its respective subscriber network, said each one of said units including a wireless transceiver configured to wirelessly communicate with other of said units, said each one of said units being normally wireline-connected to said service provider via a switch in said unit;

wherein said switch couples said transceiver and said subscriber network to said service provider when said service provider is wireline connected to said unit and said switch couples said transceiver to said subscriber network when said service provider is not wireline connected to said unit; and

wherein a first one of said units ~~interfacing with its respective subscriber network~~ which is not wireline connected to said service provider is both wirelessly and wireline connected to said service provider by way of a wireless connection to a second one of said units, said second one of said units ~~interfacing with its respective subscriber network~~ and being having said normal wireline connect[[ed]]ion to said service provider; and

wherein data is relayed between said first one of said units and said network
service provider by:

receiving a connect message from said first one of said units at said second one of said units;
encapsulating said connect message within a message addressed from said second one of said units and transmitting said encapsulated connect message over said normal wireline connection to a network control of said network service provider;
receiving an indication of authorization at said second one of said units;
receiving data packets from said wireless transceiver of said first one of said units at said second one of said units; and
based on said indication of authorization, forwarding said data packets over said normal wireline connection to said network service provider.

53. (previously presented) The network of claim 52 wherein said wireless connection to said second one of said units comprises an intermediate one of said plurality of network interface units which is not wireline connected to said service provider and which is wirelessly connected to both said first one of said units and said second one of said units.

54. (previously presented) The network of claim 53 wherein data derived from, or destined for, said subscriber network associated with said first one of said units and/or data derived from, or destined for, said subscriber network associated with said intermediate one of said units is wireline-transmitted to, or from, respectively, said service provider via said second one of said units.

55. (currently amended) A method, comprising:

providing a plurality of network interface units serviced by a network service provider, each one of said units interfacing with its respective subscriber network, said each one of said units including a wireless transceiver configured to wirelessly communicate with other of said units, said each one of said units being normally wireline-connected to said service provider via a switch in said unit;

wherein said switch couples said transceiver and said subscriber network to said service provider when said service provider is wireline connected to said unit and said switch couples said transceiver to said subscriber network when said service provider is not wireline connected to said unit; and

wherein a first one of said units ~~interfacing with its respective subscriber network~~ which is not wireline connected to said service provider is both wirelessly and wireline connected to said service provider by way of a wireless connection to a second one of said units, said second one of said units ~~interfacing with its respective subscriber network~~ and being having said normal wireline connect[[ed]]ion to said service provider; and

wherein data is relayed between said first one of said units and said network service provider by:

receiving a connect message from said first one of said units at said second one of said units;

encapsulating said connect message within a message addressed from said second one of said units and transmitting said encapsulated connect message over said normal wireline connection to a network control of said network service provider;

receiving an indication of authorization at said second one of said units;

receiving data packets from said wireless transceiver of said first one of said units at said second one of said units; and

based on said indication of authorization, forwarding said data packets over said normal wireline connection to said network service provider.

56. (new) A method, comprising:

detecting, by a first subscriber of a network, loss of a wireline connection between said first network subscriber and said network;

broadcasting a connect message via a wireless transceiver of said first network subscriber, said connect message received by a wireless transceiver of a second subscriber of said network;

if said second network subscriber has a wireline connection to said network, relaying said connect message to network control of a network service provider of said network via said second subscriber wireline connection by encapsulating said connect message within a message addressed from said second subscriber and transmitting said encapsulated connect message over said second subscriber wireline connection to said network control; and

said second network subscriber forwarding data packets wirelessly received from said first network subscriber to said network service provider over said second subscriber wireline connection provided that said second network subscriber previously received an indication of authorization of said first network subscriber from said network control in response to said encapsulated connect message.

57. (new) The method of claim 56 wherein said second network subscriber does not have said second subscriber wireline connection, said method further comprising:

broadcasting a second connect message via a wireless transceiver of said second network subscriber, said second connect message received by a wireless transceiver of a third subscriber of said network;

if said third network subscriber has a wireline connection to said network, relaying said second connect message and said connect message to network control of a network service provider of said network via said third subscriber wireline connection by encapsulating both said second connect message and said encapsulated connect message within a message thereby obtaining a further encapsulated message, said further encapsulated message being addressed from said third subscriber and transmitting said further encapsulated message over said third subscriber wireline connection to said network control; and

said third network subscriber forwarding data packets wirelessly received from said first network subscriber and said second network subscriber to said network service provider over said third subscriber wireline connection provided that said third network subscriber previously received an indication of authorization of both said first network subscriber and said second network subscriber from said network control in response to said further encapsulated connect message.

58. (new) A system, comprising:

first system component for detecting, by a first subscriber of a network, loss of a wireline connection between said first network subscriber and said network;

second system component for broadcasting a connect message via a wireless transceiver of said first network subscriber, said connect message received by a wireless transceiver of a second subscriber of said network;

if said second network subscriber has a wireline connection to said network, third system component for relaying said connect message to network control of a network service provider of said network via said second subscriber wireline connection by encapsulating said connect message within a message addressed from said second subscriber and transmitting said encapsulated connect message over said second subscriber wireline connection to said network control; and

fourth system component for permitting said second network subscriber to forward data packets wirelessly received from said first network subscriber to said network service provider over said second subscriber wireline connection provided that said second network subscriber previously received an indication of authorization of said first network subscriber from said network control in response to said encapsulated connect message.

59. (new) The system of claim 58 wherein said second network subscriber does not have said second subscriber wireline connection, said system further comprising:

fifth system component for broadcasting a second connect message via a wireless transceiver of said second network subscriber, said second connect message received by a wireless transceiver of a third subscriber of said network;

if said third network subscriber has a wireline connection to said network, sixth system component for relaying said second connect message and said connect message to

network control of a network service provider of said network via said third subscriber wireline connection by encapsulating both said second connect message and said encapsulated connect message within a message thereby obtaining a further encapsulated message, said further encapsulated message being addressed from said third subscriber and transmitting said further encapsulated message over said third subscriber wireline connection to said network control; and

seventh system component for permitting said third network subscriber to forward data packets wirelessly received from said first network subscriber and said second network subscriber to said network service provider over said third subscriber wireline connection provided that said third network subscriber previously received an indication of authorization of both said first network subscriber and said second network subscriber from said network control in response to said further encapsulated connect message.

60. (new) Apparatus, comprising:

means for detecting loss of a wireline connection between a first network subscriber and said network;

apparatus for broadcasting a connect message via a wireless transceiver of said first network subscriber, said connect message received by a wireless transceiver of a second subscriber of said network;

if said second network subscriber has a wireline connection to said network, apparatus for relaying said connect message to network control of a network service provider of said network via said second subscriber wireline connection by encapsulating said connect message within a message addressed from said second subscriber and

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transmitting said encapsulated connect message over said second subscriber wireline connection to said network control; and

apparatus for permitting said second network subscriber to forward data packets wirelessly received from said first network subscriber to said network service provider over said second subscriber wireline connection provided that said second network subscriber previously received an indication of authorization of said first network subscriber from said network control in response to said encapsulated connect message.

61. (new) The apparatus of claim 60 wherein said second network subscriber does not have said second subscriber wireline connection, said method further comprising:

apparatus for broadcasting a second connect message via a wireless transceiver of said second network subscriber, said second connect message received by a wireless transceiver of a third subscriber of said network;

if said third network subscriber has a wireline connection to said network, apparatus for relaying said second connect message and said connect message to network control of a network service provider of said network via said third subscriber wireline connection by encapsulating both said second connect message and said encapsulated connect message within a message thereby obtaining a further encapsulated message, said further encapsulated message being addressed from said third subscriber and transmitting said further encapsulated message over said third subscriber wireline connection to said network control; and

apparatus for permitting said third network subscriber to forward data packets wirelessly received from said first network subscriber and said second network subscriber

to said network service provider over said third subscriber wireline connection provided that said third network subscriber previously received an indication of authorization of both said first network subscriber and said second network subscriber from said network control in response to said further encapsulated connect message.